

## HYDRODYNAMICS CONTROL METHOD AND APPARATUS

### WHAT I CLAIM IS:

1. (Canceled) A method for establishing a plug flow through a process vessel comprising an enclosed cylindrical container, an inlet conduit, an outlet conduit and a permeable barrier placed in the flow path of fluid that is passing through said container, said permeable barrier constructed in a manner that will permit adjustment of the permeability to compensate for variations in the feed rate, density and viscosity of the said fluid.
2. (Canceled) The method of claim 1 whereby said permeable barrier is of louvered shutter construction with the louvers being adjustable from wide open to closed.
3. (Canceled) The method of claim 1 whereby the permeability of said permeable barrier can be discretely regulated at various areas on said barrier.
4. (Canceled) The method of claim 2 and including a mechanism on the exterior of said vessel connected to said permeable barrier in a manner that will permit manipulation of the louvers.
5. (Withdrawn) An apparatus for establishing a plug flow of fluid passing through a process vessel consisting of a permeable barrier placed within said vessel in the flow path of said fluid and including a means for adjusting the permeability of the said barrier.
6. (Withdrawn) An apparatus of claim 5 including a louvered shutter type construction of the permeable barrier with a means for discrete adjustment of the permeability of various areas of said barrier.
7. (Withdrawn) An apparatus of claim 6 including an external means on said vessel connected to said louvered shutter type permeable barrier in such a manner as to permit discrete adjustment of the louvers from wide open to closed.

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8. (New) In a processing vessel wherein the process is time sensitive and the fluid flowing through the vessel for processing may be of varying flow rate, density and viscosity a means for establishing a plug flow of said fluid by the placement of one or more permeable barrier inside of said processing vessel in the flow path of said fluid, said barrier constructed in a manner that will permit the permeability to be adjusted discretely within different areas of the same said barrier to compensate for variations in the flow rate, density and viscosity of the fluid being processed in different areas of said processing vessel.
9. (New) The means of claim 1 where the fluid being processed is oil and water and the permeability of same said barrier is varied independently in each of the areas of the processing vessel through which said oil and water flow.
10. (New) The means of claim 1 where same said barrier is of a rotatable louvered shutter construction whereby said rotation can be independently regulated in various areas of same said barrier within the processing vessel.
11. (New) The means of claim 10 including additional means on the exterior of the processing vessel connected to said rotatable louvered shutters for independently rotating said shutters to vary the permeability of same said barrier in different areas inside of said processing vessel.

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